



Case report

An unusual case of self-strangulation by ligature

Kishor Kumar Badiadka, MD, Assistant Professor^a, Tanuj Kanchan, MD, Associate Professor^{b,*}, Deepak Herald D'Souza, MD, Associate Professor^a, Kiran Subhash, Undergraduate student of medicine^b, Shirley Vasu, MD, Professor^c

^a Department of Forensic Medicine, Yenepoya Medical College, Mangalore (Yenepoya University), India

^b Department of Forensic Medicine, Kasturba Medical College, Mangalore (Manipal University), India

^c Department of Forensic Medicine, Thrissur Medical College, Thrissur, India

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ABSTRACT

Self-strangulation is an uncommon method of suicide. We report an unusual case of self-strangulation where the body was found in an open area with a ligature around neck and another around the feet. The case was initially taken up as homicide. The manner was determined as suicide later based on detailed investigations. The deceased had used two ligatures tied to heavy stones, one secured around the feet and the other around the neck to strangulate him. The case is reported for its rarity and the unusual method adopted by the victim to commit suicide by self-strangulation in an open area. In cases where it is difficult to reach a definitive conclusion as to manner of death, it is of utmost importance that a systematic death scene investigation, a meticulous post mortem examination and an intelligent interpretation of the findings is carried out.

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1. Introduction

Ligature strangulation is a known method of homicide. In contrast, self-strangulation by ligature is quite uncommon in occurrence.¹ Victim committing suicide by suicidal ligature strangulation often proves to be very resourceful in finding or devising the lethal ligature.² Although many cases of "atypical strangulations" are described in forensic literature,³ rare and unusual methods employed to achieve self-strangulation continue to attract attention of the scientific community for the intellectual insights that these cases provide to literature.

We report an unusual case of self-strangulation where a dead body was found in an open area with a ligature around neck and another around the feet. The case was initially taken up as homicide. The manner was determined as suicide later based on detailed investigations. The deceased in fact, had used two ligatures tied to heavy stones, one secured around the feet and the other around the neck to strangulate him.

2. Case report

Dead body of a 48 year old male was found in a secluded place in an unusual position. The body was found lying supine on a rock, with the head and feet below the level of the trunk, and being pulled down by ligatures encircling the neck and the feet respectively. The gravitational pull by these ligatures was derived from the weight of stones tied to the ligatures (Fig. 1). The weight of the stone tied to the ligature around the neck was 18 kg while the weight of the stone tied to the ligature around the legs was 12 kg. A slip-knot was used in the ligature around neck that was present on the lateral aspect of left side of neck (Fig. 2). Medicolegal autopsy was conducted on the same day. The deceased was a well-built male; the body was stiff at all joints with fixed post mortem lividity on the back. Congestion of the head and face was evident. An obliquely placed ligature mark was present encircling the neck above the level of thyroid cartilage in the midline. Ligature mark was discontinuous (6 cm) in the area of the knot below the left ear. No other external injuries were observed on the body. Bloodless dissection of neck did not show any soft tissue contusions or extravasation of blood in the neck muscle structures. The laryngo-hyoid apparatus was intact. Internal examination did not reveal any significant anatomic abnormalities. Toxicological analysis of blood and viscera was negative for agrochemicals, drugs and substances of abuse. Cause of death was furnished as ligature strangulation. Death scene investigation did not

* Corresponding author. Department of Forensic Medicine, Kasturba Medical College, Light House Hill Road, Mangalore 575 001, India. Tel.: +91 824 2444590x5565, +91 824 2444590x5731, +91 9448252394 (Mobile); fax: +91 824 2428183.

E-mail addresses: tanujkanchan@yahoo.co.in, tanuj.kanchan@manipal.edu (T. Kanchan).



Fig. 1. Death scene: Unusual position of the deceased lying supine on a rock with the head and feet below the level of the trunk and being pulled down by a ligature tied to a stone and encircling the neck and another ligature around a stone and encircling the feet.

reveal any findings suggestive of homicide. Further investigations revealed that the deceased was suffering from psychiatric illness, and had attempted suicide previously.

A plausible reconstruction of the event, based on the death scene findings was done. It is suggested that the deceased while sitting on a flat rock had initially tied the ligature around a stone and encircling the legs. He thereafter proceeded to tie another ligature encircling the neck that was already tied to the bigger stone. The position of the upper limbs suggested that while lying supine on the flat rock, he threw the head stone backwards to a distance, causing his neck to be constricted. The attitude of hyperextension of the body might have prevented a possible escape. Based on the detailed death scene investigation, autopsy findings, information on the history of psychiatric illness/previous suicide attempt and intellectual discussions on the possible reconstruction, the manner of death was determined as suicidal.

3. Discussion

Evaluation of the manner of death (homicide/suicide) in cases of ligature strangulation can be an extremely complex objective.⁴ A possibility of self-strangulation being confused with homicide exists primarily owing to the widely prevalent belief that it is impossible to carry out self-strangulation as a means of suicide. It is suggested that a close collaboration between investigative and medicolegal fields is required in such cases.³ Previous cases have been reported indoors and secured status of doors and windows forms an important criterion to differentiate homicide and suicide. Dead body was found in an open area in an unusual posture with ligatures tied around neck and feet that was enough to arouse the suspicion of homicide in the present case. No signs of dragging of body were present on the scene and no signs of struggle, external injuries or defense wounds were present on the body. It seems highly



Fig. 2. Obliquely placed ligature encircling the neck with a slip-knot on the left side of neck. The ligature is wrapped around and tied to a large stone.

inconceivable for a homicide to be carried out in such an unusual manner. Careful examination revealed that the feet were loosely fitted in the cloth wrapped around the stone and not tied to each other as expected in a case of homicide. In the present case, homicide thus, seemed to be an unlikely possibility. A history of mental illness and a previous suicidal attempt favoured suicide as the possible manner.

In cases of self-strangulation besides ropes and clothings, materials such as telephone cord, sphygmomanometer collar,⁴ nylon stockings,⁵ elastic bands,⁶ belts,³ and wires² have been used. Self-strangulation is frequently attained by multiple turns or multiple knots of the ligature material in most of the cases. Literature review of self-strangulation cases shows that the knot in these cases is usually present at the anterior region of the neck.^{4,7} The ligature in suicidal strangulation may be knotted (half-knot/double knot), without knotting or tightened like a tourniquet. It is suggested that the ligature material would need to be of a non-slip type to ensure that the pressure on the neck is maintained even after consciousness is lost.⁸ The ligature material and the type of knot used in the present study is very similar to that commonly employed in suicide by hanging. In the reported case, a slip knot was employed by the deceased and pressure on the neck was exerted by the weight tied to the ligature around neck compounded by the posture of the deceased. Sliding knot observed in our case is rarely reported in literature relating self-strangulation. The majority of the suicidal ligature strangulation cases in forensic

literature reports ligature marks which are mostly horizontal and complete. A rare variant is the present case, where the ligature mark was oblique and incomplete. Laryngohyoid fractures and other neck injuries are extremely uncommon in cases on suicidal ligature strangulation.⁷ Internal neck findings in our case are similar to the known observations in the earlier studies.

The case was initially investigated as homicide. However, death scene examination, autopsy findings and investigation into the past history of the deceased confirmed it as a suicide by self-strangulation. The case is reported for its rarity and the unusual method adopted by the victim to commit suicide by self-strangulation. This case of self-strangulation is probably the first in literature that reports an outdoor occurrence of self-strangulation. In cases where it is difficult to reach a definitive conclusion as to manner of death, it is of utmost importance that a systematic death scene investigation, a meticulous post mortem examination and an intelligent interpretation of the findings is carried out.

Conflict of interest statement

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Ethical approval

None declared.

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